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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,562	10/26/2000	Stephen Francis Bush	BB1165 US NA	3393

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER	
TRAN, PHILIP B	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/697,562	BUSH ET AL.	
	Examiner	Art Unit	
	Philip B Tran	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. This office action is in response to the amendment filed on 08/16/2004. Claims 1-6 have been amended. Claims 7-14 have been newly added. Therefore, pending claims 1-14 are presented for further examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, the term "may be" on line 2 makes the claim being indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-6, 9 and 11-14 are rejected under 35 U.S.C. § 102(e) as being anticipated by Aimoto U.S. Pat. No. 6,570,876.

Regarding claim 1, Aimoto teaches a communications network (= packet switching network) [see Col. 1, Lines 8-16] comprising:

at least one source unit configured to generate messages for relay (= incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29];

a smart node (= switch (1)) capable of storing programming instructions (= packet queuing algorithm and command) [see Abstract and Col. 3, Lines 59-64 and Col. 6, Lines 59-64], receiving messages for relay from said source unit (= receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority) [see Fig. 1 and Col. 5, Lines 23-30], determining at least a merit value for said received messages (= determining priority value in the header of the packet) [see Fig. 3 and Col. 5, Lines 42-58], dynamically reprioritizing the received messages for relay based upon said merit value (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group) [Col. 6,

Lines 1-10 and Col. 6, Lines 15-22], and transmitting the reprioritized received messages (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT) [see Col. 6, Lines 35-39]; and

at least one portal node adapted to receive said reprioritized received messages transmitted from said smart node (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT connected to a network [see Figs. 1-2 and Col. 5, Lines 31-41 and Col. 6, Lines 35-39]. This suggests that the reprioritized packets are transmitted out of the switch to another node (next/destination node) in the network).

Regarding claim 2, Aimoto further teaches said smart node comprises an electronic computer for executing said programming instructions (= a network manager can change the packet queuing algorithm by issuing a command from the management terminal PT (16Cn)) [see Figs. 1-2 and Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 3, Aimoto further teaches said programming instructions comprise active messages (= control command for changing packet queuing algorithm) [see Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 4, Aimoto teaches a communications network (= packet switching network) [see Col. 1, Lines 8-16] comprising:

at least one source unit configured to generate messages for relay (= incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29];

a smart node (= switch (1)) capable of receiving programming instructions and storing said programming instructions (= packet queuing algorithm and command) [see Abstract and Col. 3, Lines 59-64 and Col. 6, Lines 59-64], receiving messages for relay from said source unit and storing the received messages for relay in a queue (= receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority) [see Fig. 1 and Col. 5, Lines 23-30], determining at least a merit value for said received messages (= determining priority value in the header of the packet) [see Fig. 3 and Col. 5, Lines 42-58], and dynamically reprioritizing the received messages for relay in said queue based upon said merit value (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group) [Col. 6, Lines 1-26];

at least one portal node adapted to receive said retransmitted received messages from said at least one smart node for relay (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT connected to a network [see Figs. 1-2 and Col. 5, Lines 31-41 and Col. 6, Lines 35-39]. This suggests that the reprioritized packets are transmitted out of the switch to another node (next/destination node) in the network); and

at least one communications node adapted to send said programming instructions to said smart node (= management terminal PT (16Cn) issuing a command via management unit (9) for changing packet queuing algorithm) [see Figs. 1-2 and Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 5, Aimoto further teaches said smart node comprises:

a message storage queue (= a plurality of queues (83)) [see Fig. 1 and Col. 6, Lines 11-26];

a transmitter (= packet transmission unit (6)) [see Fig. 1 and Col. 6, Lines 35-39];

a receiver (= packet receiving unit (2)) [see Fig. 1 and Col. 5, Lines 23-30];

a queue controller for writing messages received at said smart node into said message storage queue (= relaying priority control unit (3) for storing the packets in the buffer memory (72) with a plurality of queues (Q1 to Qn) and transferring to the packet relaying unit (4) before sending packets to a plurality of queues (Q10 to Q1n)... (Qj0 to Qjn)) [see Fig. 1 and Col. 5, Lines 23-30 and Col. 6, Lines 11-26] and for removing messages from said message storage queue for relay transmission by said transmitter (= packet read out circuits ((81) & (82)) for reading out packets from the queues and forwarding to the packet transmission unit (6) to output port) [see Fig. 1 and Col. 6, Lines 28-39]; and

a dynamic reprioritization controller (= transmission priority control unit (5)) for specifying an order of transmission of said removed message for relay transmission by said transmitter (= the transmission priority control unit (5) performs storing packets

received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups based on the header information of each of those packets and queuing those packets according to the priority for each group) [Col. 6, Lines 1-10 and Col. 6, Lines 15-22].

Regarding claim 6, Aimoto further teaches at least one receiver for receiving said messages for relay from said source unit (= packet receiving unit (2) for receiving incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29].

Regarding claim 9, Aimoto teaches a method for dynamic reprioritizing messages, comprising:

receiving messages from a source unit and storing said received messages in a buffer unit (= receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority) [see Fig. 1 and Col. 5, Lines 23-30];

determining at least a merit value for said received messages (= determining priority value in the header of the packet) [see Fig. 3 and Col. 5, Lines 42-58], and reprioritizing the received messages for relay in said queue based upon said merit value (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality

of groups and queuing those packets according to the priority for each group) [Col. 6, Lines 1-26]; and

transmitting the reprioritized received messages (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT) [see Col. 6, Lines 35-39].

Regarding claim 11, Aimoto further teaches said received messages are stored in a queue (= queues (83)) [see Fig. 1 and Col. 6, Lines 11-26].

Regarding claim 12, Aimoto further teaches a smart node (= switch (1)) reprioritizes said received messages (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group) [Col. 6, Lines 1-10 and Col. 6, Lines 15-22].

Regarding claim 13, Aimoto further teaches said smart node transmits said reprioritized received messages (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT) [see Col. 6, Lines 35-39].

Regarding claim 14, Aimoto further teaches said smart node receives programmable instructions from a communication node (= management terminal PT (16Cn) issuing a command via management unit (9) for changing packet queuing algorithm) [see Figs. 1-2 and Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7-8 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Aimoto, U.S. Pat. No. 6,570,876 in view of Tonchev et al (Hereafter, Tonchev), U.S. Pat. No. 6,324,570.

Regarding claim 7, Aimoto does not explicitly teach said merit value for said received messages is determined heuristically. However, Tonchev , in the same field of prioritized transferring of data packet endeavor, discloses utilization of prioritization heuristic in determining the priority value [see Tonchev, Abstract]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the teaching of Tonchev in the system of Aimoto in order to assure that data will be delivered on time to the destination while minimizing overall waiting time [see Tonchev, Col. 3, Lines 9-11].

Claims 8 and 10 are rejected under the same rationale set forth above to claim 7.

Response to Arguments

8. Applicant's arguments have been fully considered but they are not persuasive because of the following reasons:

Aimoto teaches a packet switching network [see Col. 1, Lines 8-16] comprising at least one source unit configured to generate messages for relay such as incoming packets from the network via input port IN [see Fig. 1 and Col. 5, Lines 23-29]. Aimoto further teaches a smart node such as a switch (1) capable of storing programming instructions such as packet queuing algorithm and command [see Abstract and Col. 3, Lines 59-64 and Col. 6, Lines 59-64], receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority [see Fig. 1 and Col. 5, Lines 23-30].

Furthermore, Aimoto teaches determining at least a merit value for said received messages such as determining priority value in the header of the packet [see Fig. 3 and Col. 5, Lines 42-58] and dynamically reprioritizing the received messages for relay based upon said merit value. For example, the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group [Col. 6, Lines 1-10 and Col. 6, Lines 15-22], and transmitting the reprioritized received messages such as the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT [see Col. 6, Lines 35-39].

In addition, Aioto further teaches at least one portal node adapted to receive said reprioritized received messages transmitted from said smart node. For example, the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT connected to a network [see Figs. 1-2 and Col. 5, Lines 31-41 and Col. 6, Lines 35-39]. This suggests that the reprioritized packets are transmitted out of the switch to another node (next/destination node) in the network.

As a result, cited prior art does disclose a system and method as broadly claimed by the applicant. Applicant has still failed to identify specific claimed limitations that would define a clearly patentable distinction over prior arts. Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter recited in independent claims. Dependent claims are also rejected at least by virtue of dependency on

independent claims and by other reasons shown above. Accordingly, claims 1-14 are respectfully rejected.

Other References Cited

9. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Capps et al, U.S. Pat. No. 6,563,836.

B) Mattson et al, U.S. Pat. No. 5,937,205.

C) McClure et al, U.S. Pat. No. 5,867,663.

D) Cambray et al, U.S. pat. No. 5,278,898.

E) Dyer, U.S. Pat. No. 6,629,220.

F) Sweeney, U.S. Pat. 4,965,716.

Conclusion

10. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS ACTION. IN THE EVENT A FIRST REPLY IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CAR 1.136(A) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT, HOWEVER, WILL THE STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN SIX MONTHS FROM THE MAILING DATE OF THIS FINAL ACTION.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (571) 272-3991. The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (571) 272-3978.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Philip Tran
Philip Tran
Art Unit 2155
Dec 21, 2004

Bharat Barot

BHARAT BAROT
PRIMARY EXAMINER